UNITED STATES PATENT AND TRADEMARK OFFICE

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09/746,854	12/22/2000	James Morrow	83336.0476	7292

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EXAMINER
PATEL, NIKETA I

ART UNIT	PAPER NUMBER
2181	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 07/17/2008 have been fully considered but they are

not persuasive. The applicant argues that the Jonhson reference does not teach the

limitations of (1) "...plurality of gaming machines having a non-true real time computer

having a gaming processor, a non-true real time operating system and a non-true real

time-enabled circuit board..." and (2) "....plurality of gaming machines a non-true

real time computer having a non-true real time operating system and a non-true real

time-enabled circuit board...". Examiner respectfully disagrees with these arguments.

As per the first argument, Johnson reference has been cited to show the use of a

general purpose device controller in a gaming network art. Johnson teaches a use of

non-true real time gaming computer [Johnson figure 2, element 201 and column 6, lines

8-45] in communication with a true-real time computer [Johnson figure 2, element 213

and column 6, lines 8-45] for providing a real-time programmable interface to a general-

purpose non-real-time computing system [Johnson column 5, line 62 to column 6, line

7.] The combination of Swales, Montijo, Halviatti and Johnson teaches the limitation of

"...plurality of gaming machines having a non-true real time computer having a gaming

processor, a non-true real time operating system and a non-true real time-enabled

circuit board...". Furthermore, in response to applicant's arguments against the

references individually, one cannot show nonobviousness by attacking references

individually where the rejections are based on combinations of references. See In re

Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091,

231 USPQ 375 (Fed. Cir. 1986).

As per the second argument, the limitation of "....plurality of gaming machines a

non-true real time computer having a non-true real time operating system and a non-

true real time-enabled circuit board..." was canceled by the amendment filed on

2/28/2008 and therefor no longer considered for the examination purposes.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

4.   Claims 1-4, 6-20, 22-27 and 29-38 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Swales et al. U.S. Patent Number: 6,233,626 B1 (hereinafter

'*Swales*'), Montijo U.S. Patent Number: 6,052,107 (hereinafter '*Montijo*') and further in

view of Johnson et al. U. S. Patent Number: 6,622,185 B1 (hereinafter '*Johnson*'.)

5.   **Referring to claims 1, 12, 19, 24**, tacking claim 1 as exemplary, *Swales* teaches

a generic device controller unit system [see figure 3], the system comprising: a plurality

of machines networked in a machine network environment, each of the plurality of

machines having a non-true real time computer having a processor, a non-true real time

operating system, and a non-true real time-enabled circuit board [see figure 3, element

12, 'Master Device'; column 4, lines 5-20, 37-45] and a plurality of peripheral devices

[see figure 3, element 14, 'I/O Device' and column 1, lines 23-42, 'field devices'], the

system comprising: a general purpose device controller [see figure 3, element 10 and

column 4, lines 5-7, 'the COM-adapter'] employing asynchronous true real time

peripheral device control [see column 1, lines 23-42 and column 4, sentence beginning

at line 66, field devise are controlled via specific true real time control protocols, such as

MODBUS plus, Interbus-S, Profibus DP, Echelon, Seriplex, CAN DeviceNet, CAN

SDS], wherein the device controller interfaces between the peripheral devices and a

non-true real time computer a non-true real time operating system [see figure 3,

element 10 located between elements 12 & 14 and column 1, lines 64-67 and column 2,

lines 1-5, a personal computer/ host computer/ host device/ field master; column 6, lines

14-28 states that the COM-adapter is compatible with host program running over

Windows 95 & NT, therefore the host is running on non-true real time operating system

(i.e., Windows 95 & NT)], thereby allowing a non-true real time operating system to

implement true real time control of the plurality of peripheral devices [see column 3,

lines 15-23, 46-53, COM-adapter allows the field master (i.e., the host device) to control

field devices in real time without special operating system]; and a data and protocol

communications interface [see figure 3, elements 22, 'ATI interface'], wherein the

communications interface connects the processor and the peripheral devices [see figure

3, elements 22 and ATI interface are part of element 10 which provides communication

interface between the host device (element 12, master device) and the peripheral

devices (element 14, I/O device)], thereby allowing the processor to utilize a single

protocol and associated data to communicate with the peripheral devices which may be

utilizing protocols and associated data which are different than that used by the

processor [see column 6, lines 20-25, the host side uses TCP/IP protocol which is

different then the protocol used by the field devices, ATI protocol, as described in

column 9, lines 30-34.]

Swales does not set forth the detailed limitation of the non-true real time

computer having an non-true real time-enabled circuit board however, *Montijo* teaches a

non-true real time computer having a non-true real time operating system and non-true

real time-enabled circuit board [see *Montijo* column 4, lines 31-49, 'a computer

motherboard' and lines 62-67, 'operating system' and column 5, lines 1-6, 'Windows 95,

3.1, NT operating system' i.e., the non-true real time operating system] in order to allow

the host computer to process information.

One of ordinary skill in the art at the time of applicant's invention would have

clearly recognized that it is quite advantageous for the non-true real time computer of

Swales to have a non-true real time operating system and non-true real time-enabled

circuit board to provide the host computer with information processing capability. It is for this reason that one of ordinary skill in the art would have been motivated to implement the non-true real time computer of *Swales* with a non-true real time operating system and non-true real time-enabled circuit board in order to allow the host computer to process information.

Swales does not set forth the limitation of the plurality of machines being gaming machines networked in a gaming machine network environment however, *Johnson* teaches a use of non-true real time gaming computer [*Johnson* figure 2, element 201 and column 6, lines 8-45] in communication with a true-real time computer [*Johnson* figure 2, element 213 and column 6, lines 8-45] for providing a real-time programmable interface to a general-purpose non-real-time computing system [*Johnson* column 5, line 62 to column 6, line 7.]

One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous for the non-true real time computer of *Swales* to have a plurality of gaming machines networked in a gaming machine network environment, each of the plurality of gaming machines having a non-true real time computer having a gaming processor, a non-true real time operating system, and a non-true real time-enabled circuit board, in order to for provide a real-time programmable interface to a general-purpose non-real-time computing system. It is for this reason that one of ordinary skill in the art would have been motivated to implement the non-true real time computer of *Swales* with a plurality of gaming machines networked in a gaming machine network environment, each of the plurality of gaming machines having a non-

true real time computer having a gaming processor, a non-true real time operating

system, and a non-true real time-enabled circuit board.

6.   **Referring to claims 2, 13, 25**, combination of *Swales, Montijo & Johnson*

teaches wherein the generic device controller unit system produces true real time

peripheral device control while interfaced with a non-true real time operating system

running standard non-true real time software **[see *Swales* figure 3, element 10 located**

between elements 12 & 14 and column 1, lines 64-67 and column 2, lines 1-5, a

personal computer/ host computer/ host device/ field master; column 6, lines 14-28

states that the COM-adapter is compatible with host program running over Windows 95

& NT, therefore the host is running a non-true real time operating system (i.e., Windows

95 & NT).]

7.   **Referring to claims 3, 14, 20, 26**, combination of *Swales, Montijo & Johnson*

teaches the system and the method wherein the generic device controller unit system

functions as a distributed processing environment **[see column 6, lines 14-23 and**

column 3, lines 15-23, 46-53, networked devices COM-adapter, host computer and field

devices provide distributed processing.]

8.   **Referring to claims 4, 27**, combination of *Swales, Montijo & Johnson* teaches

the system and the method wherein the generic device controller unit system further

includes customized system drivers **[see *Swales* column 6, lines 42-63, kernel firmware**

of the COM-adapter.]

9.   **Referring to claims 6, 18, 29**, combination of *Swales, Montijo & Johnson*

teaches the system and the method wherein the generic device controller unit system

interfaces with the non-true real time operating system that functions in a Win32

environment [see *Swales* column 5, lines 1-6, 'Windows 95, 3.1, NT operating system'

i.e., Win32 environment non-true real time operating system.]

10.   **Referring to claims 7, 15, 22, 30**, combination of *Swales, Montijo & Johnson*

teaches the system and the method wherein the generic device controller unit system is

an input/output device interface for a processor to peripheral devices [see *Swales* figure

3, element 10 and column 3, lines 46-53 and column 4, lines 5-7, the COM-adapter

provides communication interface to a master processor and an I/O device.]

11.   **Referring to claims 8, 16, 31**, combination of *Swales, Montijo & Johnson*

teaches the system and the method wherein the generic device controller unit system

provides real time device control to resource management capabilities of a standard

non-true real time operating system [see *Swales* column 3, lines 11-23, 46-53, column

6, lines 14-28 and column 1, lines 23-42, the COM-adapter allows a host running

Windows OS to control field devices which are using real time protocol such as

MODBUS, the host does runs Windows operating system, Windows operating system

do not run true real time kernel; also see column 3, 15-23, which specifically discloses

that real time component are not required, instead standard network components are

shared.]

12.   **Referring to claims 9, 17, 23, 32**, combination of *Swales, Montijo & Johnson*

teaches the system and the method wherein the generic device controller unit system

produces true real time peripheral device control without the higher level functionality of

the processor [see *Swales* column 3, lines 11-23, 46-53, column 6, lines 14-28 and

column 1, lines 23-42, the COM-adapter allows a host running Windows OS to control field devices which are using real time protocol such as MODBUS, the host does runs Windows operating system, Windows operating system do not run true real time kernel; also see column 3, 15-23, which specifically discloses that real time component are not required, instead standard network components are shared.]

13.   **Referring to claims 10, 33**, combination of *Swales, Montijo & Johnson* teaches the system and the method wherein the generic device controller unit system produces true real time peripheral device control without the processor using a true real time kernel [see *Swales* column 3, lines 11-23, 46-53, column 6, lines 14-28 and column 1, lines 23-42, the COM-adapter allows a host running Windows OS to control field devices which are using real time protocol such as MODBUS, the host does runs Windows operating system, Windows operating system do not run true real time kernel; also see column 3, 15-23, which specifically discloses that real time component are not required, instead standard network components are shared.]

14.   **Referring to claims 11, 34**, combination of *Swales, Montijo & Johnson* teaches the system and the method wherein the generic device controller unit system produces true real time peripheral device control without the processor utilizing a layered true real time operating system [see *Swales* column 3, lines 11-23, 46-53, column 6, lines 14-28 and column 1, lines 23-42, the COM-adapter allows a host running Windows OS to control field devices which are using real time protocol such as MODBUS; also see column 3, 15-23, which specifically discloses that real time component are not required, instead standard network components are shared.]

15.   **Referring to claims 35-38,** the combination of *Swales, Montijo & Johnson* and *Halviatti* teaches a use of MODBUS over Ethernet to TCP for the communication of information between the field devices and the field master [see *Swales* column 1, lines 57-60] however does not set forth the limitation of wherein the facilitated interaction between the peripheral devices and non-true real time computer comprise data transfer that are not bounded by length. *Swales* discloses various other types of network communication protocols such as Interbus-S, Profibus DP, Modbus Plus, Echelon, Seriplex, CAN DeviceNet, CAN SDS, and CANCAL each of which having specific and different communication requirements [see column 1, lines 28-41 – different communication requirements – i.e., each of various types of protocols has different types of data transfer length.]

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it is quite advantageous to facilitate interaction between the peripheral and the non-true real time computer with data transfers that are not bounded by length by providing various type of communication protocols in order to provide user with the flexibility to implement various types of communication protocols. It is for this reason that one of ordinary skill in the art would have been motivated to implement interaction between the peripheral and the non-true real time computer with data transfers that are not bounded by length by providing various type of communication protocols in order to obtain above stated advantage.

16.   Claims 5, 21, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Swales, Montijo & Johnson as modified above in claims 1, 19, 24 and further in view of

Evoy et al. U.S. Patent Number: 5,958,020 (hereinafter *"Evoy"*.)

17.   **Referring to claims 5, 21, 28**, combination of *Swales, Montijo & Johnson*

teaches a generic device controller unit system and a method for facilitating interaction

between a processor and any number of peripheral devices **[***Swales* figure 3, element

10 located between elements 12 & 14 and column 1, lines 64-67 and column 2, lines 1-

5, a personal computer/ host computer/ host device/ field master; column 6, lines 14-28

states that the COM-adapter is compatible with host program running over Windows 95

& NT, therefore the host is running a non-true real time operating system (i.e., Windows

95 & NT) and *Montijo* teaches serial port, figure 6, element 610.**]** The combination of

Swales, Montijo & Johnson does not set forth the limitation wherein Universal Serial

Bus is the default communication protocol between the generic device controller unit

system and the processor, however *Evoy* teaches a use of Universal Serial Bus

protocol between the generic device controller unit system and the processor [see *Evoy*

column 2, lines 46-60 and column 1, lines 23-43] because USB connects peripheral

devices to the resources of the computer system without consuming the input output

resources of the computer system and also provides for automatic USB peripheral

device configuration and eliminates computer system resource conflicts.

One of ordinary skill in the art at the time of applicant's invention would have

clearly recognized that it is quite advantageous for the system of *Swales, Montijo &*

Johnson to be able to automatically configure peripheral devices in order to eliminate

computer system resource conflicts by using USB protocol. It is for this reason that one

of ordinary skill in the art would have been motivated to implement USB protocol in the

system of *Swales, Montijo & Johnson* to eliminate computer system resource conflicts

and saving input output resources.

Conclusion

18.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to NIKETA I. PATEL whose telephone number is (571)272-

4156. The examiner can normally be reached on M-F 8:00 A.M. to 6:00 P.M, with every

other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alford Kindred can be reached on (571) 272 4037. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Niketa I. Patel/
Primary Examiner, Art Unit 2181